PIONEER

N70ST

MODEL

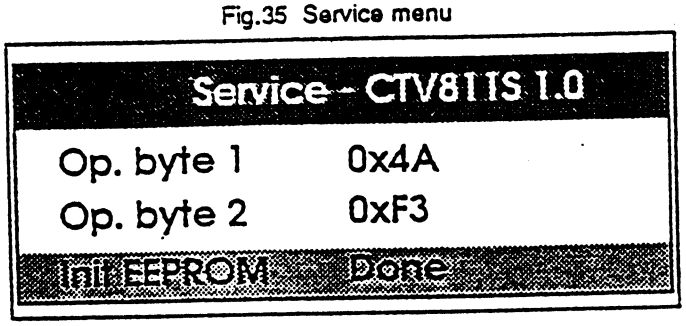
SERVICE MANUAL

Service Menu

The service menu is entered when the TV is in TV-mode and the RC5 code 0 or 58 with system address 7 is received.
Also short-circuiting of pin 20 (LED) to V_{ss} during switch -on, will bring the TV-set into service mode. The service menu is left again by pressing the TV-key.

Fig. 35 shows the service menu, the 2 option bytes represent the values of the EEPROM option bytes, that can be changed with the item-left and item-right keys. If an option byte is changed, it will be stored in the EEPROM. The initialize EEPROM item, clears all names of the programmes and cleans up the hash table. Furthermore, default values for sound and video PP will be written. While doing so, the OSD will display BUSY. When the initialisation has been finished, then the message DONE is written on the screen.

Fig.35 Service menu



EEPROM selectable options

Option Byte 1

Op7	Op6	Op5	Op4	Op3	Op2	Op1	Op0

Option Byte 2

Op15	Op14	Op13	Op12	Op11	Op10	Op9	Op8

Bit Nr	Meaning
7	Hue: 1= Available, 0 = Not Available
6	Sharpness: 1= Available, 0 = Not Available
5 [2]	Turbo Bass: 1= Available, 0 = Not Available Surround: 1 = Available, 0 = Not available
4	Stereo Plackback: 1= Available, 0 = Not Available
3	Teletext: 1= Available, 0 = Not Available
2	Nr of Scarts: 0=1 scart, 1=2 scarts
1,0	Tuning bands: 00: Invalid 01: UHF only (single band) 10: VHF and UHF (2 band) 11: VHF-L, VHF-H, UHF (s band)

Bit Nr	Meaning
7	Text strings: 1 = Strings, 0 = Symbols
6	Reserved
5a [1]	Progr storage time: 1= 30 sec. 0 = 3 sec
5b [1]	Mode after power on: 1 = Standby, 0 = Recall last mode (standby or TV)
4	Text language: 1 = East, 0 = West
3	France: 1= Available, 0 = Not Available
2	NTSC_M: 1= Available, 0 = Not Available
1	SECAM: 1= Available, 0 = Not Available
0	1= Multi standard, 0: Single standard

CHASSIS SM2 TRYB SERWISOWY - WEJŚCIE PILOTEM SERWISOWYM

I302 OPTION BYTES - OPCJE PROCESORA CTV811S V1.0

OPTION BYTE-1

Bit-7	HUE	NTSC => 1	POZOSTAŁE SYSTEMY => 0
Bit-6	SHARPNESS	ZAWSZE => 0	
Bit-5	TURBOBASS LUB SURROUND	ZAWSZE => 0	
Bit-4	STEREO PLAYBACK	ZAWSZE => 0	
Bit-3	TELETEXT	JEST => 1	NIE MA => 0
Bit-2	WEJŚCIA	DWA EUROZŁĄCZA => 1	JEDNO EUROZŁĄCZE => 0
Bit-1	PASMA	TRZY PASMA => 1	TYLKO UHF => 0
Bit-0	PASMA	ZAWSZE => 1	

OPTION BYTE-2

Bit-7	OSD	LITERY => 1	SYMBOLE => 0
Bit-6	PRODUCTION MODE	ZAWSZE => 0	
Bit-5		ZAWSZE => 0	
Bit-4	JĘZYK TXT	WSCHÓD => 0	ZACHÓD => 0
Bit-3	FRANCJA	SECAM-L => 1	POZOSTAŁE SYSTEMY => 0
Bit-2	NTSC-M	ZAWSZE => 0	
Bit-1	SECAM	ZAWSZE => 0	
Bit-0		SECAM-L => 1	POZOSTAŁE SYSTEMY => 0

POWSTAŁE NA PODSTAWIE POWYŻSZYCH DANYCH LICZBY W KODZIE DWÓJKOWYM NALEŻY PRZELICZYĆ NA KOD SZESNASTKOWY I W TAKIEJ POSTACI WPISAĆ DO PAMIĘCI.

PIN VOLTAGES OF IC'S

Pin.	CTV811S	24C08/PCF8594C		TDA8361A	TDA4665	TDA2616	TDA3654	TDA4605
1	1.5V	0V	0V	2.9V	5V	15V	2.2V	0.4V
2	0V	0V	0V	5.80V	0V	30V	0V	1.2V
3	0V	0V	0V	5.8V	0V	15V	2.2V	1.9V
4	1.7V	0V	0V	7.3V	0V	15.2V	0V	0V
5	1.8V	3.15V	3.3V	3.25V	0.5V	0V	13.2V	2.8V
6	2.4V	3.6V	3.3V	3.8V	0V	15.2V	27V	10.73V
7	2.5V	4.5V	5V	3.1V	0V	30.4V	1.6V	1.9V
8	0V	5V	5V	1.8V	0V	15.2V	3.5V	0.4V
9	2.75V			1V	5V	15V	26V	
10	0V			7.8V	0V			
11	0V			0V	3V			
12	4.28V			3.28V	3V			
13	0V			4.32V	0V			
14	4.23V			4.15V	1.4V			
15	-			3.4V	0V			
16	-			0V	1.4V			
17	-			2.1V				
18	-			1.8V				
19	-			2V				
20	5V			1.7V				
21	0V			0.3V				
22	0V			3.37V				
23	2.6V			3.37V				
24	0V			3.37V				
25	2.26V			1.8V				
26	2.41V			1.8V				
27	0V			5.85V				
28	0V			3.86V				
29	-			3.86V				
30	-			1.47V				
31	5V			1.5V				
32	0V			0V				
33	0V			5.14V				
34	0V			2.8V				
35	0V			2V				
36	3.8V			8V				
37	4.7V			0.5V				
38	5V			0.43V				
39	5V			3V				
40	0V			3.6V				
41	-			0V				
42	2.5V			2.35V				
43	0V			2.8V				
44	5V			3.58V				
45	5.4V			3.95V				
46	-			3.95V				
47	5V			4.28V				
48	0V			4.55V				
49	3.5V			0.37V				
50	3.5V			3.43V				
51	0V			4.5V				
52	0V			6.57V				

- All voltages are in Volt
- Readingsare taken with a digital multimeter.
- Readingsare taken with PAL B/G colour-bar signal input
- Measurements are taken when there is not any on the screen.

- Sound min.
- Contrast, Brightness, Color } Normal

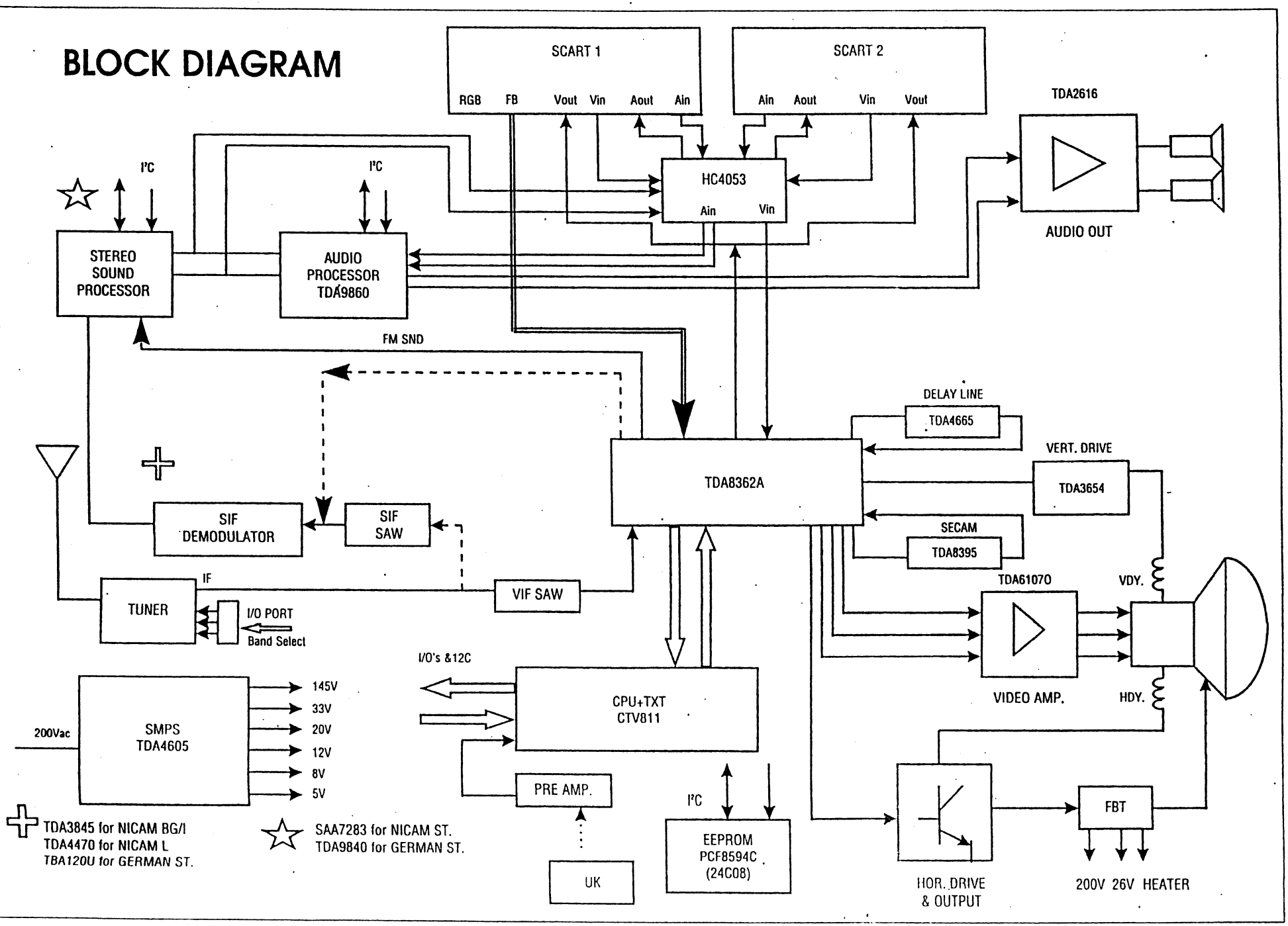
PIN VOLTAGES OF IC'S

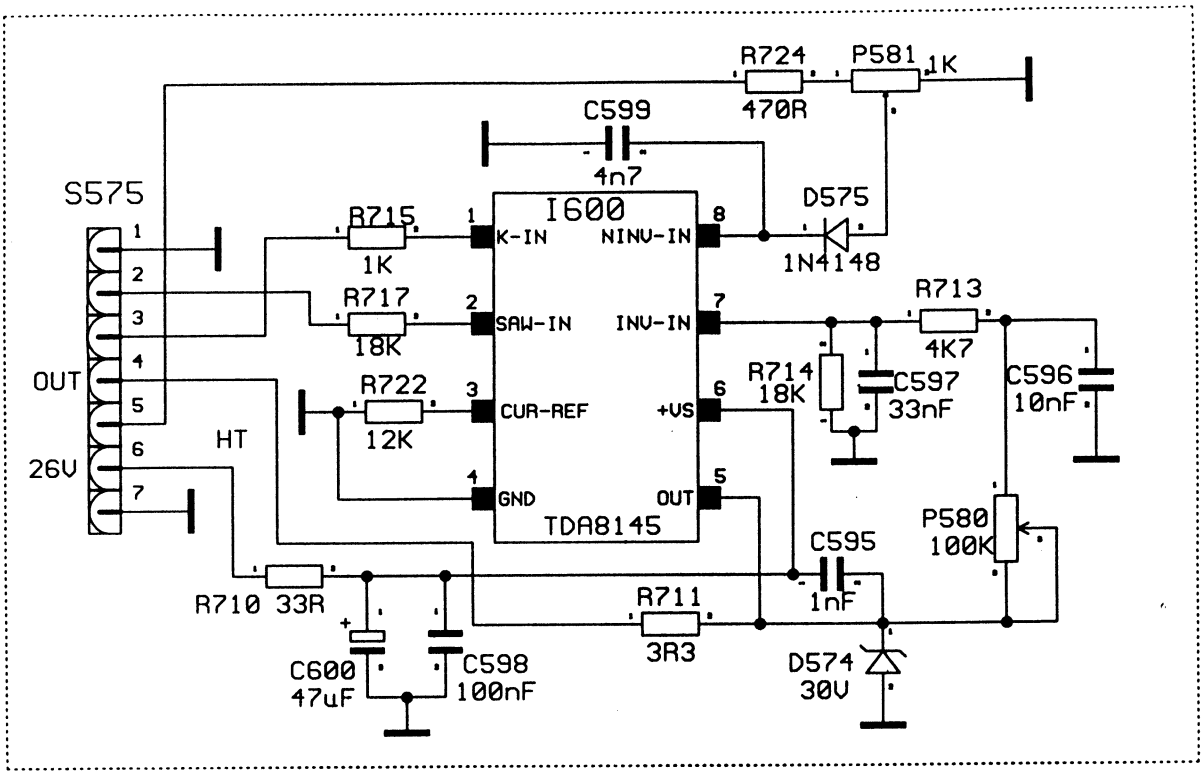
Pin.	TDA8145	TDA6107Q	SAA7283	TDA9860	TBA120U	TDA3845
1	13.42V	2V	4.7V	3.9V	0V	1.75V
2	13.42V	2.13V	2.3V	-	-	-
3	8V	2.55V	4.8V	3.9V	-	1.95V
4	0V	0V	0V	3.9V	-	4.38V
5	8.5V	5.70V	2.3V	3.9V	-	0.1V
6	17.6V	200V	1.7V	8V	-	-
7	1V	158V	2.4V	-	-	4.83V
8	1.75V	152V	2.4V	0V	-	3.7V
9		156V	0V	3.9V	-	3.7V
10			0V	3.9V	-	-
11			2.4V	3.9V	12V	-
12			0V	3.9V	0.5Vpp	1.57V
13			0V	3.9V		0V
14			0V	3.9V		4.74V
15			2.3V	3V		-
16			2.3V	3V		1.75V
17			1.6V	2.8V		
18			4.7V	3.9V		
19			0V	3.9V		
20			2.4V	3.9V		
21			2.6V	3.9V		
22			2.4V	3.9V		
23			2.4V	3.9V		
24			0V	3.9V		
25			2.4V	0V		
26			5V	-		
27			2.4V	3.9V		
28			2.4V	-		
29			2.4V	3.9V		
30			2.3V	-		
31			2.4V	-		
32			1.3V			
33			2.4V			
34			2.3V			
35			2.4V			
36			4.8V			
37			0V			
38			4.7V			
39			0V			
40			3.4V			
41			2.4V			
42			0V			
43			2.4V			
44			0V			
45			2.3V			
46			4.7V			
47			4.6V			
48			2.5V			
49			2.9V			
50			2.5V			
51			4.7V			
52			4.7V			

* All voltages are in Volt
* Reading are taken with a digital multimeter.
* Reading are taken with a colour-bar signal input.

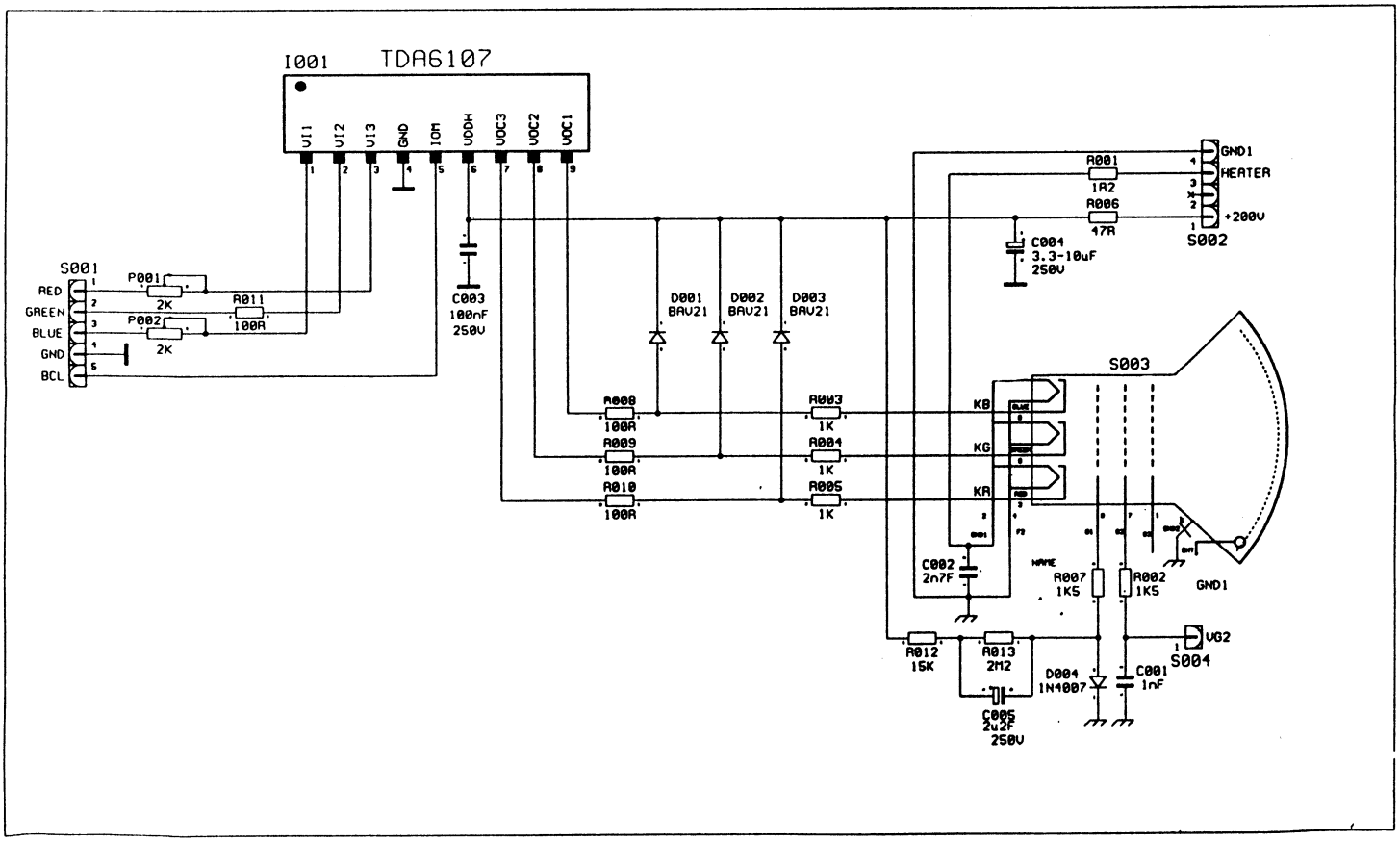
* Sound min.
  Contrast
  Brightness } Normal
  Color

BLOCK DIAGRAM





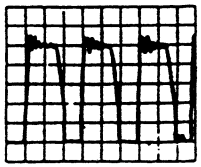
E/W MODUL CIRCUIT DIAGRAM /
E/W MODULE SCHALTUNGSPLAN /
CIRCUIT DIAGRAMME DU MODULE E/W



CRT BOARD (AUTO-CUTOFF) CIRCUIT DIAGRAM /
CRT BAUSTEIN (AUTO-CUTOFF) SCHALTUNGSPLAN /
CIRCUIT DIAGRAMM DU SUPPORT TUBE AVEC AUTO-CUTOFF

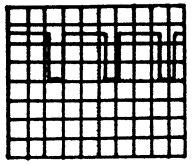
OSCILLOSCOPE SHAPES / OSZILLOGRAMME / DIAGRAMMES D'OSCILLOSCOPE

1) 5usn/div 100 volt/div



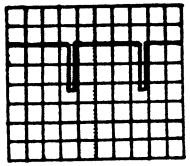
Drain of Q 101

2) 20usn/div 2 volt/div



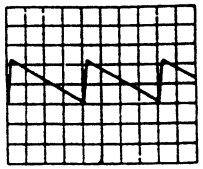
I 301 pin 36

3) 5 msn/div 2 volt/div



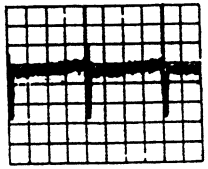
I 301 pin 37

4) 5 msn/div 0.5 volt/div



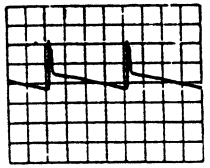
I 101 pin 42

5) 5msn/div 1 volt/div



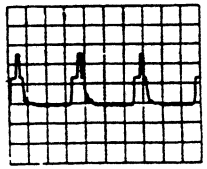
I 576 pin 3

6) 5msn/div 1 volt/div



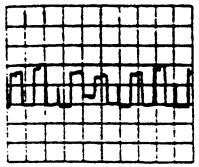
I 576 pin 5

7) 20usn/div 2 volt/div



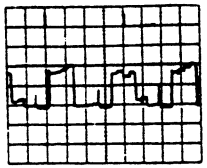
I 101 pin 38

8) 20usn/div 2 volt/div



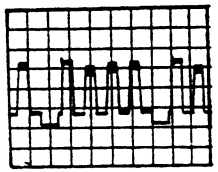
I 101 pin 20

9) 20usn/div 2 volt/div



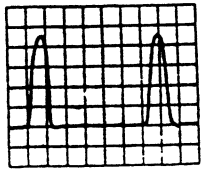
I 101 pin 19

10) 10usn/div 2 volt/div



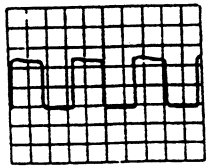
I 101 pin 18

11) 10usn/div 250 volt/div



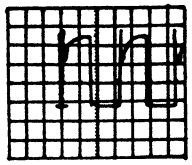
Collector of Q 602

12) 20usn/div 0.5 volt/div



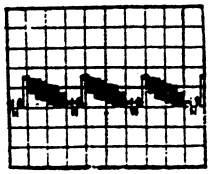
I 101 pin 37

13) 20usn/div 50 volt/div

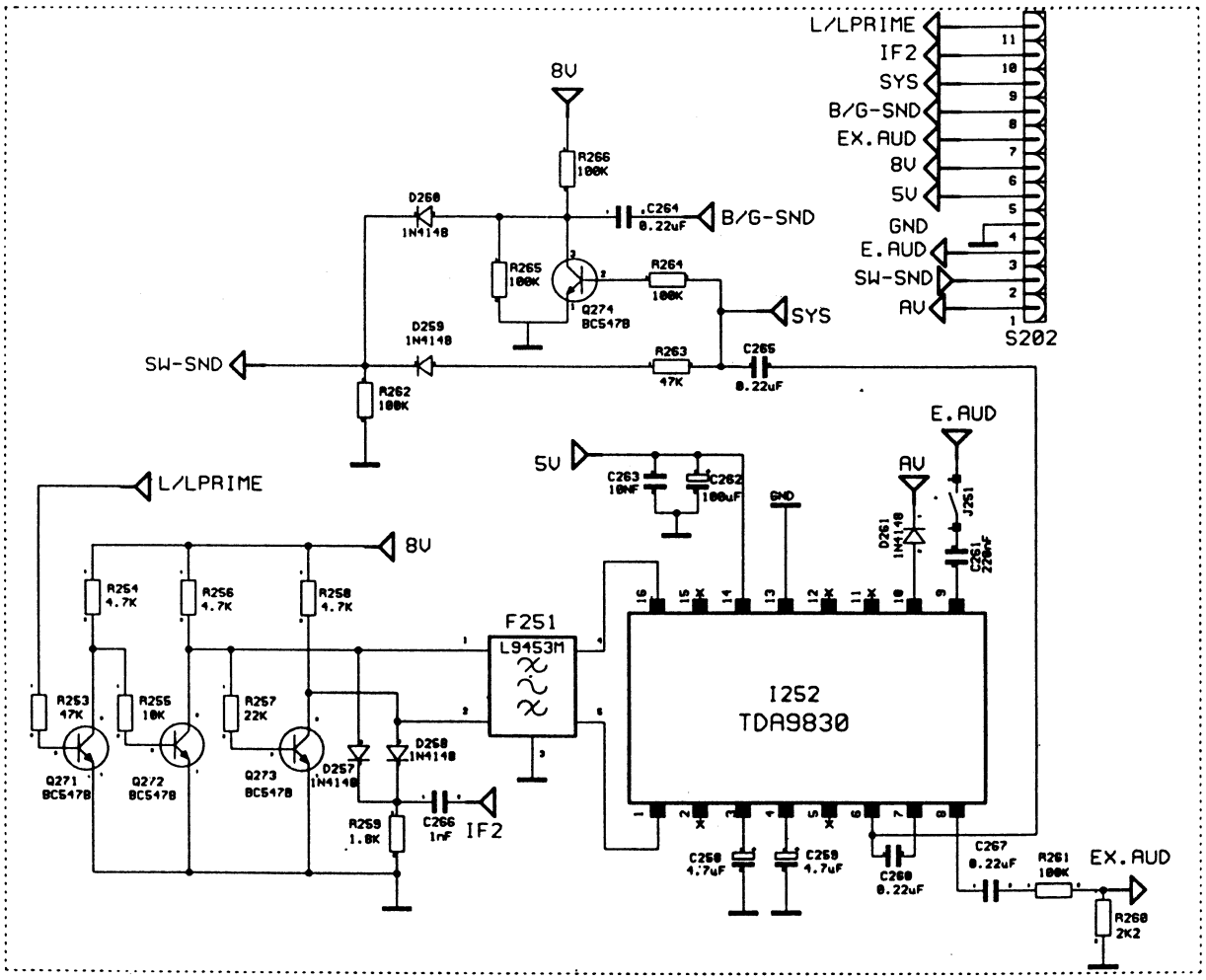


Collector of Q580

14) 20usn/div 1 volt/div



I 101 pin 13

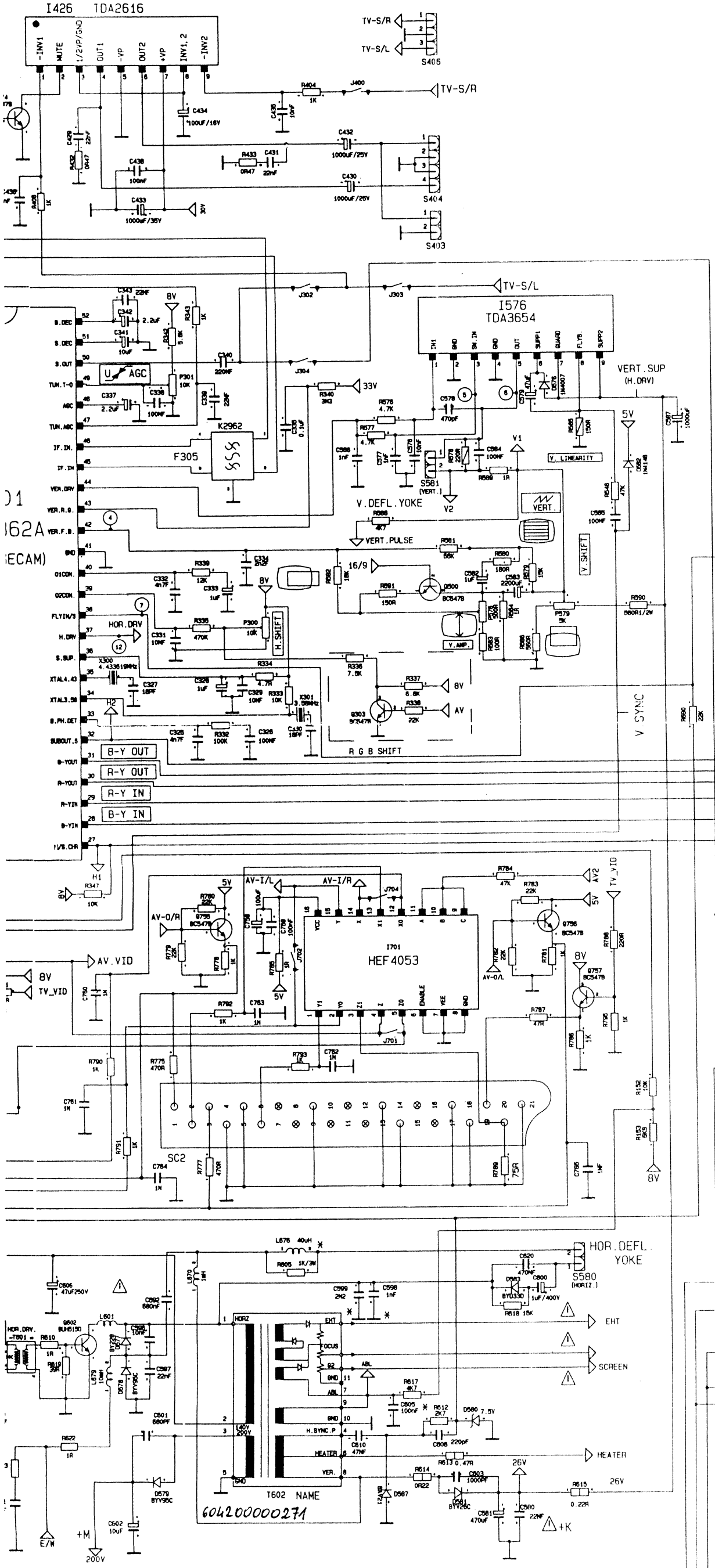


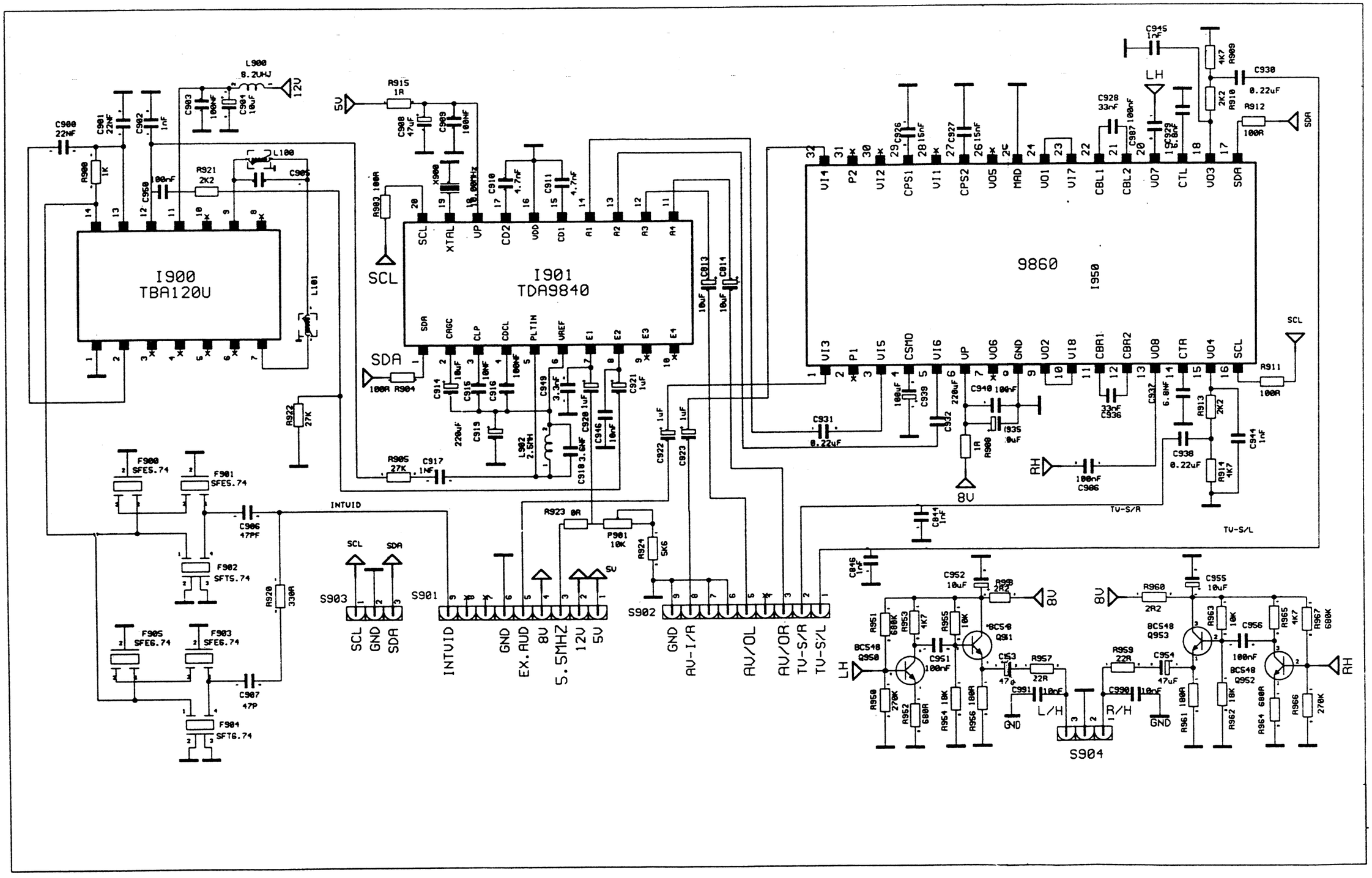
MONO SECAM L/L' BOARD CIRCUIT DIAGRAM /
MONO SECAM L/L' BAUSTEIN SCHALTUNGPLAN /
MONO SECAM L/L' CIRCUIT DIAGRAMME

SM-2 CIRCUIT DIAGRAM / SM-2 SCHASSI GESAM

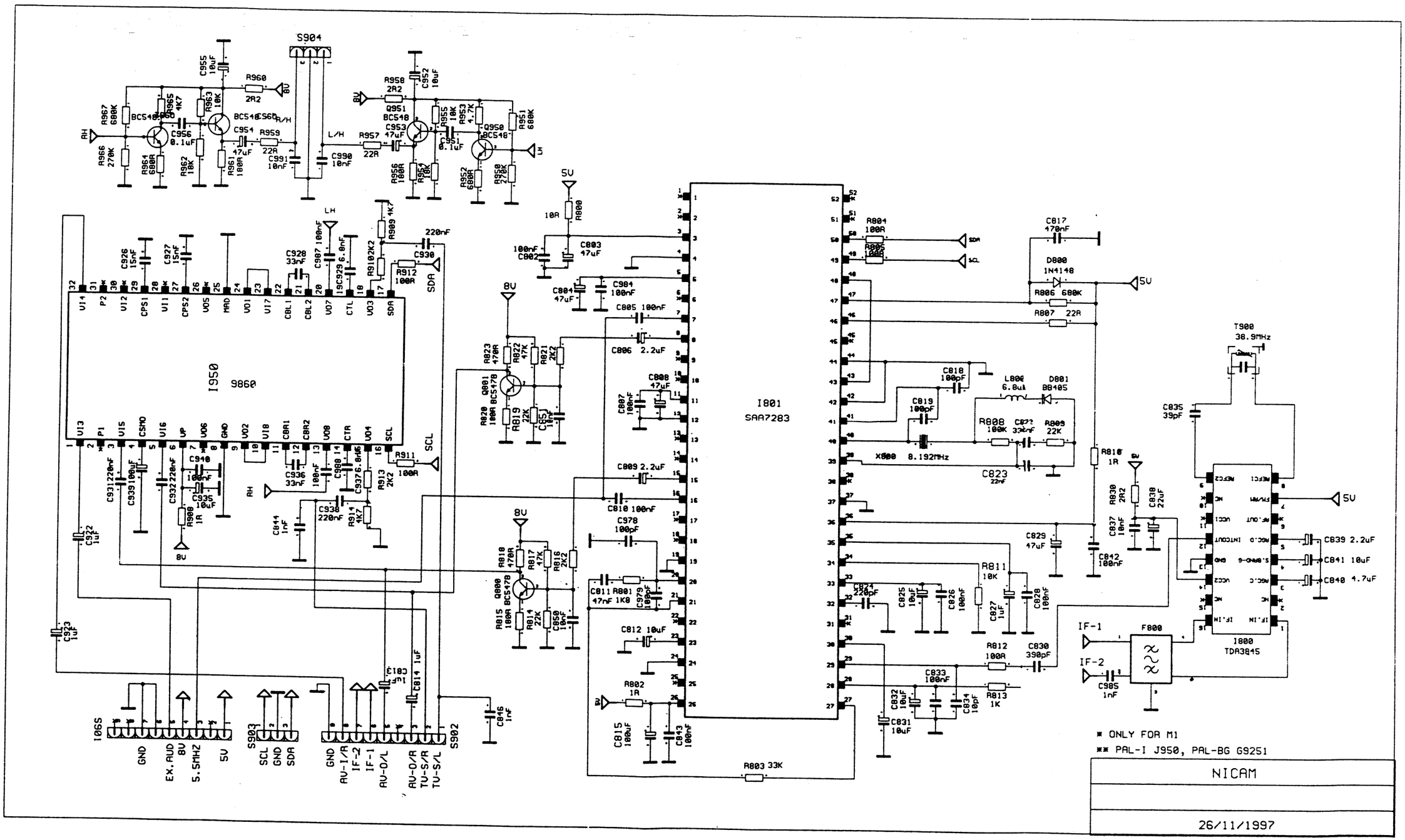
TUNER
TUNER
TUNER

GESAMTSCHALTPLAN / SM-2 CIRCUIT DIAGRAMME

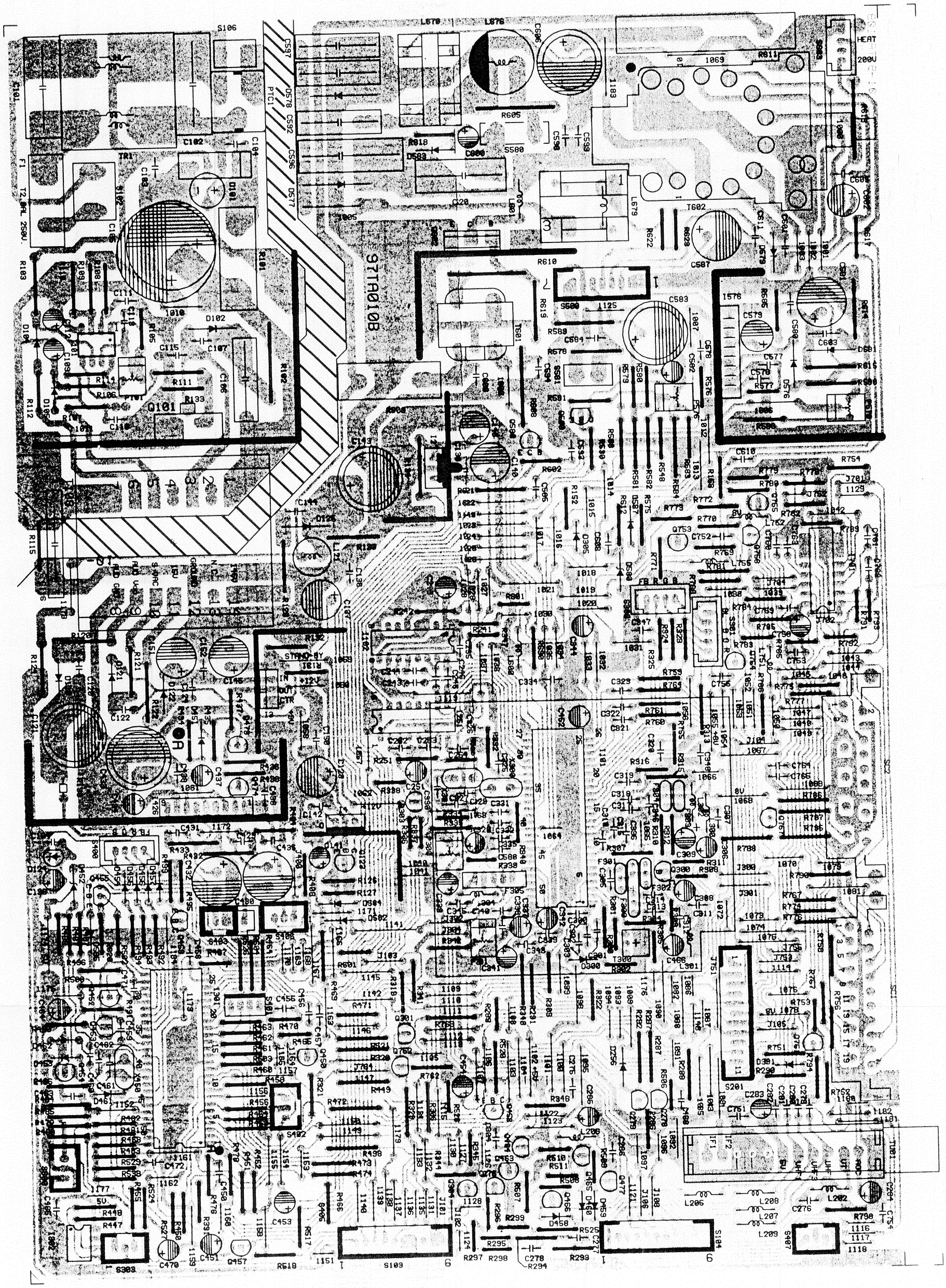




GERMAN STEREO BOARD CIRCUIT DIAGRAM /
GERMAN STEREO BAUSTEIN SCHALTUNGSPLAN /
CIRCUIT DIAGRAMME DE GERMAN STÉRÉO



NICAM STEREO BOARD CIRCUIT DIAGRAM /
NICAM STEREO BAUSTEIN SCHALTUNGSPLAN /


S106
C101
C102
C104
TR1
F1
T2.0AL 250V.
S102
C103
D101
C111
C116
D102
C115
C107
R111
R133
Q101
R112
R115
R101
R102
R103
R105
R106
R107
R108
R109
R114
C106
C108
C109
C110
C113
C114
C117
C118
D103
D104
D105
D106
PTC1
CS97
D578
CS92
CS96
D577
S7TA010B
L679
L678
C696
R611
1069
1183
HEAT
200U
R605
CS98
CS99
S580
R618
D583
C600
C20
D581
1005
L679
T602
R622
C587
CS11
D579
R610
S500
1125
C583
1576
C579
C580
C603
D580
R615
R590
R619
T601
R589
C584
R576
C582
C581
C594
R573
R580
R591
R588
C590
C592
R548
R592
R575
R584
R583
R576
1012
C610
R754
R779
R778
J701
1129
R780
C755
J702
R762
L762
C762
R789
C761
C760
C763
L761
C758
L763
R772
R770
Q753
C752
R769
R771
L755
C757
R781
R788
C768
C766
C767
C769
C770
C771
C772
C773
C774
C775
C776
C777
C778
C779
C780
C781
C782
C783
C784
C785
C786
C787
C788
C789
C790
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C792
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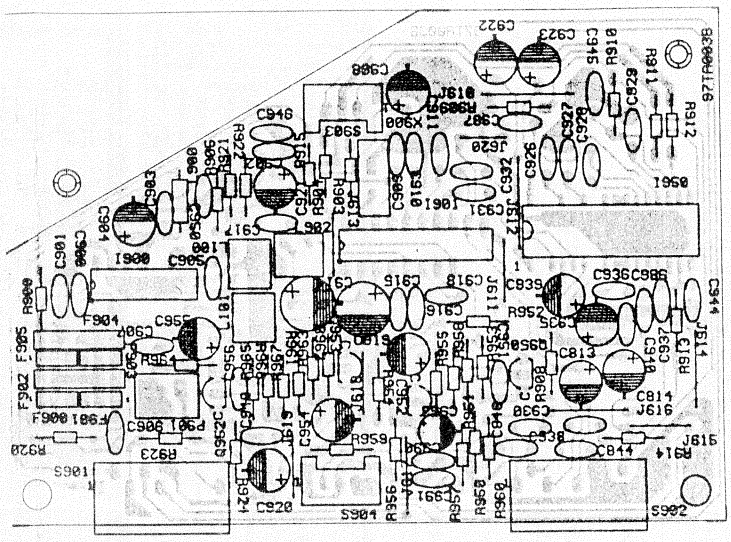
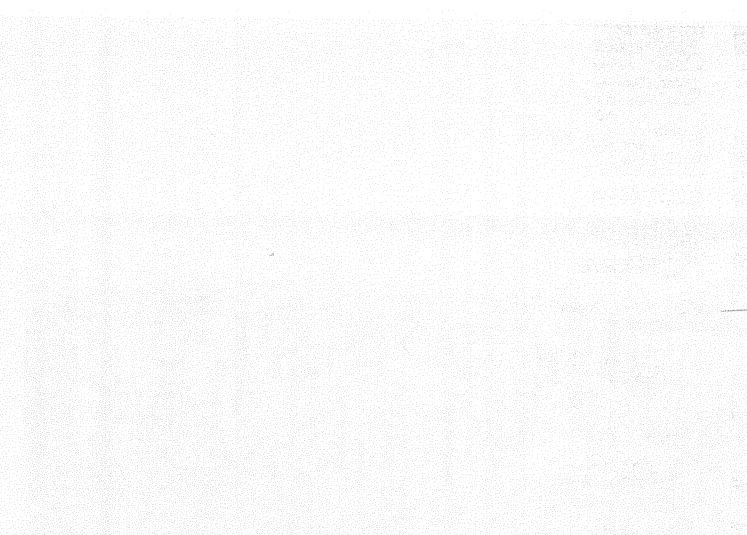
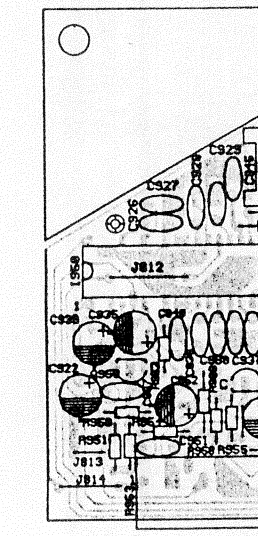
C801
C802
C803
C804
C805
C806
C807
C808



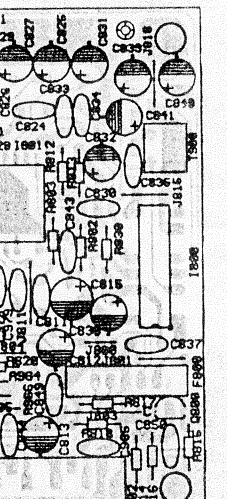
GERMAN STEREO BOARD /
GERMAN STEREO BAUSTEIN /
PCB DE GERMAN STÉRÉO



NICAM STEREO BOARD /
NICAM STEREO BAUSTEIN /
PCB DE NICAM STÉRÉO



MONO SECAM L/L' BOARD /
MONO SECAM L/L' BAUSTEIN /
PCB DE MONO SECAM L/L'



E/W MODUL BOARD /
E/W MODULE BAUSTEIN /
PCB DU MODULE E/W

CRT BOARD (AUTO-CUTOFF) /
CRT BAUSTEIN (AUTO-CUTOFF) /
PCB DU SUPPORT TUBE AVEC AUTO-CUTOFF

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